Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/52**

Paper 5 (Core) **May/June 2016**

MARK SCHEME

Maximum Mark: 24

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2016 series for most Cambridge IGCSE®, Cambridge International A and AS Level components and some Cambridge O Level components.

® IGCSE is the registered trademark of Cambridge International Examinations.

© UCLES 2016

Abbreviations

awrt answers which round to
cao correct answer only
dep dependent
FT follow through after error
isw ignore subsequent working
oe or equivalent
SC Special Case
nfww not from wrong working
soi seen or implied

<table>
<tr><th colspan="2">Question</th><th>Answer</th><th>Mark</th><th>Part Marks</th></tr>
<tr><td>1</td><td>(a)</td><td>An example
and
illustration of last – first + 1</td><td>1</td><td></td></tr>
<tr><td></td><td>(b)</td><td>$\frac{\text{first+last}}{2}$ oe</td><td>1</td><td></td></tr>
<tr><td>2</td><td>(a)</td><td><table><tr><th>Sequence</th><th></th><th>Median</th><th>Sum</th></tr><tr><td>3, 4, 5, 6, 7, 8, 9</td><td>7</td><td>6</td><td>42</td></tr><tr><td>7, 8</td><td>2</td><td>7.5</td><td>15</td></tr><tr><td>20, 21, 22, …, 40</td><td>21</td><td>30</td><td>630</td></tr><tr><td>5, 6, 7</td><td>3</td><td>6</td><td>18</td></tr><tr><td>2, 3, 4, 5, 6, 7, 8, 9</td><td>8</td><td>5.5</td><td>44</td></tr><tr><td>2, 3, 4, 5, 6, 7</td><td>6</td><td>4.5</td><td>27</td></tr><tr><td>5, 6, 7, 8, 9</td><td>5</td><td>7</td><td>35</td></tr></table></td><td>5</td><td>B1 for first two rows
B1 for each of the last four rows
C opportunity</td></tr>
<tr><td></td><td>(b)</td><td>multiply</td><td>1</td><td></td></tr>
<tr><td></td><td>(c)</td><td>odd [number]</td><td>1</td><td></td></tr>
<tr><td></td><td>(d)</td><td>ends in .5 oe</td><td>1</td><td></td></tr>
<tr><td>3</td><td></td><td><table><tr><th>Sequence</th><th></th><th>Median</th><th>Sum</th></tr><tr><td>4, 5, 6</td><td>3</td><td>5</td><td>15</td></tr><tr><td>7, 8, 9, 10</td><td>4</td><td>8.5</td><td>34</td></tr><tr><td>4, 5, 6, 7, 8, 9, 10
or 24, 25</td><td>7
or 2</td><td>7
or 24.5</td><td>49</td></tr></table></td><td>5</td><td>1st row: B1
2nd row:B1 for sequence
B1 for median
3rd row: B1 for sequence
B1 for median</td></tr>
</table>

© Cambridge International Examinations 2016

Question	Answer	Mark	Part Marks
4	485 500	**2**	**B1** 500 or 971 seen **C** opportunity
5	38, 39 8, 9, 10, 11, 12, 13, 14 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	**3**	**B1** for each sequence or **B1** for 2 × 38.5 **B1** for 7 × 11 or 11 × 7
6 (a)	1, 2, 4, 8, 16 oe	**1**	
	median not an integer when even number of terms oe	**1**	
(b)	32 or 64 or 128, etc	**1**	
Communication seen in one of 2(a), 3, 4, 5 or 6(b)		**1**	

© Cambridge International Examinations 2016